

Support Facilities for the Future Force

By Mr. Larry Allen and Mr. Kirk McGraw

Evolving Future Force doctrine focuses on executing decisive offensive and defensive combat operations—winning the war—but little thought has been given to Future Force missions such as stability and support—winning the peace—and to operational support facilities¹ needed at all levels of conflict. The logistics community will doctrinally drive support facility requirements. The U.S. Army Corps of Engineers will drive site selection, construction technologies, and environmental concerns. The U.S. Army Maneuver Support Center (MANSCEN) schools—Engineer, Military Police, and Chemical—will drive the doctrine, organization, training, materiel, leader development, personnel, and facilities (DOTMLPF) requirements for site selection, construction, environmental concerns, and all aspects of protection for these facilities.

This article attempts to translate current and past force requirements for base camps and supply depots into the context of the still-evolving Future Force. By doing so, requirements for future support facilities² can be determined and provided for as the Future Force evolves. As the Future Force gains more definition, the true requirement for future support structures will also gain more definition. The purpose of this article is to start discussion about Future Force support facility needs.

A Historical Perspective

Armies have always needed and used base camps and supply depots. Valley Forge was a base camp where General George Washington's men wintered over to wait for better fighting conditions. City Point, Virginia, was General Ulysses S. Grant's supply depot for the Battle of Petersburg. Base camps and supply depots were located all across Vietnam, and the Army is using base camps today in South Korea, Kosovo, Bosnia, Afghanistan, and Iraq.

Base camps and supply depots served four basic purposes for past armies:

- Buildup, drawdown, and stockpiling.
- Lodging and planning (to include beddown and feeding).
- Protection.
- Cultural separation (for example, separating American troops from defeated adversaries, such as Germans at the end of World War II, or from different cultures, such as American troops in the Muslim world today).

While each of those tasks might be handled without them (the British commandeered civilian housing during the Revolutionary War, for example), base camps provide the best overall solution.

The Future Force

As a “joint force,” the Future Force is compatible with the Air Force, Navy, and Marine Corps. The joint force concept is more than a simple deconfliction of service-specific operations. It is the “warfare of combinations” extended beyond a single service and reaching down to the tactical level. This implies interoperable forces within each service for operational efficiency and interdependent forces among services for maximum effectiveness when combined. These forces are focused on leveraging the best potential tools of speed, operational reach, staying power, and precision offered by the strengths of each service. The very nature of “jointness” must be rooted in trust and commitment among the services.

As an expeditionary force, the Future Force goes beyond rapid deployment on short-duration missions. There is also a critical endurance aspect to our expeditionary force mindset. It must be both responsive to crisis and capable of sustained engagement—able to fight at multiple points on arrival, particularly in the austere environments that will likely be the norm. An expeditionary force can contend with the uncertainty over when and where it will be deployed and what it will be asked to accomplish. It is comfortable fighting for information versus depending on fighting with information. It is made up of adaptable formations and operations, not trained and equipped for a known array of predictable threats. An expeditionary force can contend with profound changes in the context and character of the conflict.

The Future Force is designed to fight with minimal forces, but with maximum technology that tracks friendly and enemy operations. This will allow the Future Force to identify the threat and reduce it almost simultaneously. Future Force concepts project at most a medium, unified force with light, highly lethal, highly dependable weapons systems. Heavy forces will not be required.

Army plans for the Future Force call for rapidly deploying a modular force into a theater of operations ready for combat, where it will then engage in short, high-intensity fights enabled by its superior lethality and situational awareness and understanding. The Future Force will bring everything it

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE JUN 2004		2. REPORT TYPE		3. DATES COVERED 00-04-2004 to 00-06-2004	
4. TITLE AND SUBTITLE Support Facilities for the Future Force (Engineer, Volume 34, PB 5-04-2, April-June 2004)				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Engineer Professional Bulletin,MANSCEN Directorate of Training,464 MANSCEN Loop, Suite 2661,Fort Leonard Wood,MO,65473-8926				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 4	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

needs, eliminating the need for a buildup of supplies, personnel, and equipment. It will develop the situation out of contact, either at its home station or en route. This will allow it to “see first, understand first, and act first” through superior intelligence, information management, and collaborative planning. It will finish decisively by executing strategic and/or operational maneuver to strike the enemy’s center of gravity at the decisive time and place. This force will be able to engage in combat operations 30 minutes after landing and sustain itself for a number of days during combat operations. During this time, the unit of action (UA) will be self-sustaining until it can replenish in stride or rotate to a “UA recycling point” provided by the next higher organization, the unit of employment (UE). The UE supplies subordinate UAs through multiple entry points within its operating radius and with a 48- to 72-hour planning horizon. The UE accomplishes force protection through decentralized, highly mobile operations occurring along multiple routes, relying on superior situational awareness and understanding, maneuverability, and standoff engagement. Future Force support facilities are to be pushed back at least to intermediate staging bases (ISBs) and optimally to the continental United States.

Need for Support Facilities

The Future Force logistics concept emphasizes velocity over mass, meaning that an agile, high-speed inventory in motion will be used rather than building large in-theater stockpiles. The Future Force will be resupplied and sustained during additional combat operations through “pulsed logistics” rather than by conventional, linear techniques. These operational parameters imply that the UE must be able to rapidly identify potential sites for critical command and control and sustaining nodes and develop a

sustainment infrastructure with so little effort and materiel that it can be abandoned if need be.

But there are reasons why support facility contingency plans should be incorporated into each operations plan:

- Until the entire Army is modernized to Future Force standards, including reserve, maneuver support, and maneuver sustainment elements, support facilities will be needed to support the current force modules, including joint forces. For example, the Army is charged with providing supplies to Marine Corps forces ashore for any duration over 30 days. Also included are our allies and other coalition forces. Each will require support facilities for their operations if they are not at Future Force standards. Standard reception, staging, onward movement, and integration (RSOI) protocols would apply in these cases and may for some time bleed over into the Future Force.
- It may be necessary to use support facilities to redeploy forces, liberate a country, or sustain postwar recovery efforts by using them as training facilities to reestablish a police force or military in the country. U.S.-led conflicts may devolve into occupation (in the case of Germany and Japan at the end of World War II) or long-term support (in the case of South Korea) and almost always devolve into reconstruction. Unless that reconstruction is to be performed entirely by contractors (and given the nature of postconflict casualties in Iraq, that is unlikely), then certain Army and joint forces will be needed to perform or supervise that reconstruction. While it can be argued that the Future Force will surgically remove the threat with precision effects without creating mass damages from war operations, that has not been the case in Iraq, where weapons with accuracy approaching Future Force precision were used. Further,



Advanced technologies will reduce site preparation time and logistics requirements, enabling support elements to keep pace with maneuver units.

adversaries may not feel constrained to limit damages and could adopt a scorched-earth policy.

- The current force corollary to the Future Force UA is the small, self-contained force, such as Army Special Forces and Navy SEALs. These forces do not need support facilities when they are in the operational environment, but they do need support facilities located in safe havens for planning and resupply. The Future Force is likely to follow this pattern, but with endurance as a core competency, for up to 72 hours. Units will then be cycled out of the fight for replenishment, and it is neither practical nor desirable to expose exhausted troops to a long march back to their point of entry (which may not be controlled).
- There are finite numbers of aircraft and ships available for force projection missions. Rather than increasing during a conflict, this number is likely to go down as other needs arise and as damage occurs. Maintenance also drives the number of aircraft and ships available and is directly proportional to their use. The more sorties flown by a C-17 and the more landings it makes on primitive or unimproved airfields, the more maintenance will be required on that aircraft. Navy vessels have similar constraints. For those reasons, the Air Force will want improved airfields and the Navy will want improved ports and harbors as soon as possible, thus leading to the development of support facilities for security, storage, and maintenance. Air Force RED HORSE and PRIME BEEF units are not configured for large-scale construction efforts. Construction is, and will probably remain, an Army responsibility. The Army is also responsible for port construction.
- The requirement to care for enemy prisoners of war (EPW) and displaced persons will continue to require support facilities.
- The scenario of the fight may change after arrival, creating the need for a longer stay and for a support facility.
- Not all battles, conflicts, or wars will end quickly, thus establishing the need for support facilities for efforts such as military operations other than war and foreign humanitarian assistance.
- If the goal of an effort is a regime change, then additional assistance will be needed to fill the ensuing vacuum and to help ensure the success of the new regime.

What Might Be Needed

There will be a constant need for force beddown, logistics support, medical treatment, internment, and refugee holding facilities to sustain Army operations in the contemporary operating environment. Currently, with few exceptions, this sustainment infrastructure must be in place or in the process of being built before any force deployment and must remain in place to sustain operations. As the force transitions to the Future Force, there will still be a requirement for sustainment infrastructure before or during any force deployment. This up-front requirement will decrease as the

Army transitions to the Future Force because of its embedded sustainment capabilities. However, it is likely that the Future Force will always require some form of in-theater infrastructure to sustain operations. Otherwise, where would EPWs be interned and refugees be sent? What about logistics support to multinational or coalition forces not organized along Future Force lines? Where will the pulsed logistics support originate, and how will it meet customs requirements to redeploy? That is not to say that support facilities will not change from today's norm. These facilities must be scalable, must reduce the logistics tail, must consider the environment, and must leverage technology to develop solutions out of contact. They are most likely to be built and maintained by military engineers and contractors. To enable the Future Force, there will be varying levels of support facilities. Existing facilities will be used where available; and where they are not available, tentage and other temporary structures will be used. Only in the direst of circumstances will new construction take place.

The largest support facility would be an ISB, a 10,000- to 20,000-person installation in a relatively safe location with a high level of infrastructure, heavily supported by contractors. This would be the most permanent of the three levels of facilities, and would use existing facilities if possible. If that is not possible, then temporary facilities would start with tentage and range upward to more permanent construction such as Force Provider modules, Southeast Asia (SEA) huts,³ trailers, containers, concrete masonry units, and existing buildings. Examples of these ISBs from past experience include England serving as the staging area for Allied forces preparing to invade Europe in World War II, Okinawa serving as a giant supply depot for the Vietnam War, and Saudi Arabia providing support facilities for Operations Desert Shield and Desert Storm.

A much smaller type of support facility could be called a forward operating base (FOB). Because the surrounding population might not be friendly, these facilities would need to be as self-sufficient as possible. These 100- to 200-person temporary installations would be small fortresses with high levels of self-sustaining infrastructure and might be located in unstable locations for peacekeeping and other operations.

The most flexible type of support facility might be called a forward operating location (FOL). These locations would be flexible 50- to 500-person temporary facilities in the battle zone but not near openly hostile areas. Very light temporary shelters and a tight sensor perimeter would characterize them.

Each of these facilities (and they probably are not limited to just three types) will likely change over time. Facility design and construction will be governed by the time available, the size of the force supported, and the duration of operations. The size of the engineer force available will also be factored into design and construction standards. Initial entry might require a number of FOLs to control key objectives. These would change over time into larger establishments with more facilities and creature comforts. What would distinguish them from today's norm would be their ability to be moved from one site to another as the situation dictated. As has been seen in

Iraq, overhead protection from mortars and rocket-propelled grenades is likely to remain a constant.

Technologies must be developed that will enable the UE to quickly and flexibly establish support facilities. These technologies will reduce logistics requirements by selecting sites that best meet unit-tailored requirements and provide modular, lightweight, redeployable shelter systems and minimize site preparation. This will allow the Future Force to—


- Generate a set of sites ranked according to the commander's priorities, such as force protection, proximity to water, and availability of construction materials and equipment.
- Develop a mission-specific site plan with integrated force protection.⁴
- Construct lightweight, low-cost, all-weather shelters using innovative techniques such as thin-shell composite structures that provide SEA hut performance characteristics with a fraction of the resources. The technical challenge is to identify material solutions meeting functional criteria such as cost, weight, density, and fire rating and construction criteria such as low effort, modularity, and redeployability.

Future support facilities are likely to share a number of characteristics. They may—

- Be joint.
- Be expeditionary.
- Have a smaller footprint.
- Be dispersed.
- Be relatively self-sustaining, capable of independent operation with built-in water production, power production, and waste treatment/disposal independent of local materials and labor.
- Be quickly erected modular designs.
- Require minimal site preparation.
- Be mobile, with minimal lift/transportation assets or organic means.
- Have plug-and-play modules capable of rapid expansion, contraction, and upgrades.
- Be rapidly assembled and disassembled by a small workforce or remote-controlled robots.
- Have built-in force protection, to include sensors, self-defense capability, lethal and nonlethal weapons; passive force protection measures such as standoff distance, dispersion, barriers, and overpressure protection against chemical, biological, radiological, and nuclear hazards; and perhaps be capable of providing their own 360-degree hemispherical protection, to include protection for fuels, munitions, and aircraft.
- Be capable of incorporation with existing structures.
- Use local materials and labor where they are available.

- Be environmentally friendly, to include self-contained waste treatment plants and “cradle-to-grave” site management.
- Be able to incorporate modern inventory control techniques, such as just-in-time arrival and throughput with minimum storage of supplies.
- Be able to provide sustainment support to the force immediately upon entry into the theater.

Conclusion

The Future Force will provide capabilities unmatched by today's Army. It will be a highly flexible, mobile, and lethal force on tomorrow's battlefield. But its centerpiece will still be the service member, who requires periodic rest to maintain the edge provided by superior technology. Support facilities will adapt to Future Force needs and those of the geographic location, proximity to the fight, and expected longevity. But the Future Force will not succeed without support facilities to repair battle damage, rest troops, and sustain noncombat operations. That is why it is so important that we start today to define the Future Force's support facility needs. 

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Endnotes

¹ Just as the UA and UE concepts provide a way to look beyond current force structure, the term “support facility” is used in this article to describe Future Force base camp and supply depot requirements.

² In conjunction with this discussion, the issue of airfield improvements may require a forward presence before entry to improve airfields to the minimum acceptable level for Air Force certification.

³ SEA huts were first designed for the Vietnam War.

⁴ This could require reachback to U.S. Army Corps of Engineers assets (field force engineering) to assist with site layouts requiring minimal construction effort. Constraint-based layout techniques will support dynamic reconfiguration to account for the effects of terrain.